Reading, Writing, and . . . Finance? A Comprehensive Review of Financial Literacy in the United States

By

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CERTIFICATE OF APPROVAL

Honors Thesis

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Abstract: The United States has had an overall decline in financial literacy over the past decade which can have devastating consequences if not solved as soon as possible. While the issue is known by many in a general sense, not enough is known about how different demographics are affected and not enough is being done to solve the problem. Using both general trends as well as specific and empirical studies, this thesis aims to present a complete review of the issue including identifying the most troubled areas and providing several ways in which the United States can begin to combat the problem. This thesis' findings show that those who need financial education the most are not receiving it as much as they should. Providing financial education to those who truly need it will not only improve the lives of many Americans, but it will also improve the overall economy of the United States. Policymakers and those in positions to influence financial education can use these findings to better implement financial education programs.

I. Introduction

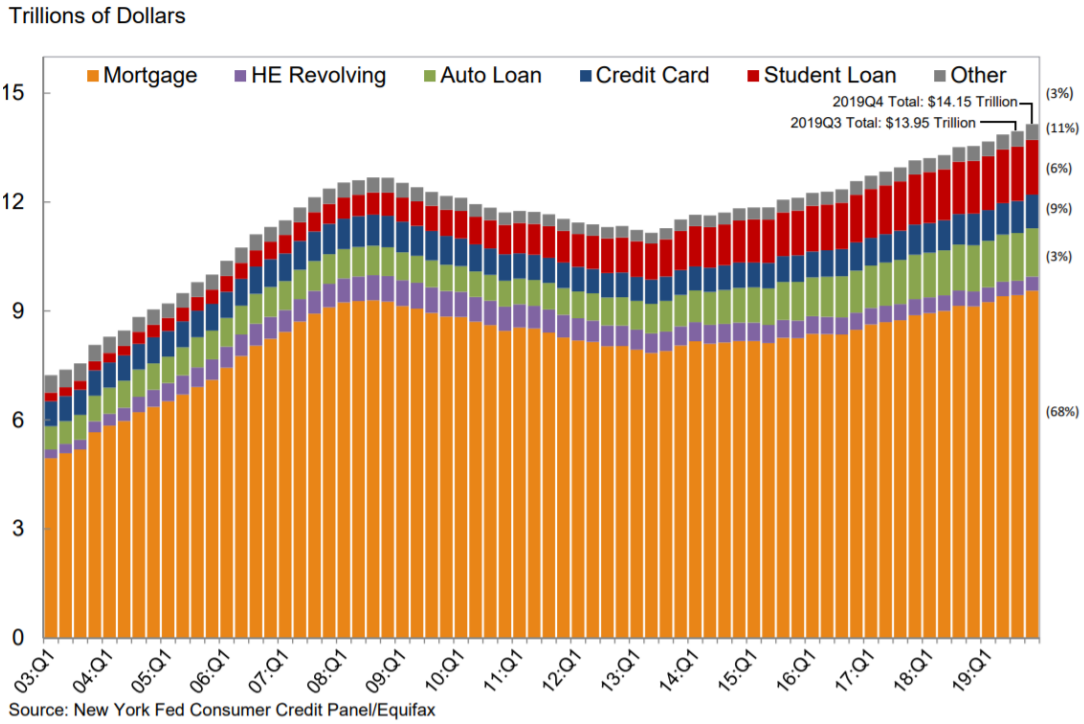
Financial Literacy has become an increasingly important issue in the United States as levels of credit card, student loan, and other forms of debt have been reaching all-time highs (Quarterly Report of Household Debt and Credit, 2019). Legislation has been proposed to solve different aspects of the financial literacy problem, but no significant progress has been made. This paper provides a comprehensive review of the current state of financial literacy in the United States including an analysis of the trends that exist in financial literacy. In addition, this paper provides a few methods to improve financial literacy in the groups that need it the most.

This approach to solving the financial literacy problem is beneficial because it provides an effective resource to those looking for a way to analyze different aspects of the financial literacy problem that exists in the Unites States today. Additionally, this approach can serve as a springboard into more in-depth research for those interested in a specific topic within financial

literacy. For those who are not looking to do more in-depth research, this approach is able to provide a solid overview of the financial literacy problem. Regardless of the motivation behind researching this topic, this approach is necessary because it is not prevalent in the current available literature.

II. Background

Overall Consumer Debt in the United States



(Figure 1)

Source: (New York Fed Consumer Credit Panel/Equifax, 2019)
https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/hhdc_2019q4.pdf

Figure 1 above shows that the amount of consumer debt in the United States has reached all-time highs since the last time the record was reached in 2009 (Quarterly Report of Household Debt and Credit, 2019). While certain types of debt, such as mortgages, are tied to appreciating assets, other types of debt, such as credit card debt and auto loans, are mostly tied to assets that do not increase in value. The nature of these kinds of purchases do not warrant the need to go

into debt, since the items do not increase in value as a way to offset the interest rate of the debt. Additionally, the different types of debt that make up the total consumer debt have not been increasing proportionally. In particular, auto loan and credit card debt have been dramatically increasing faster than the other forms of debt over the past several years.

One unique kind of debt, student loans, has become a particularly troubling issue recently. Additionally, the total student loan debt has been increasing every year. Because of their special nature, student loans require a different treatment. Student loans are usually considered "good debt" since using student loans to get a degree should allow an individual to command a higher salary in the job market. Issues arise, however, when individuals take out student loans and either major in a field of study that does not have a high demand in the job market or do not finish their degree altogether. In these instances, an individual would not receive the benefit of borrowing the money to get a degree while at the same time be burdened with the obligation to pay off the money that they have borrowed.

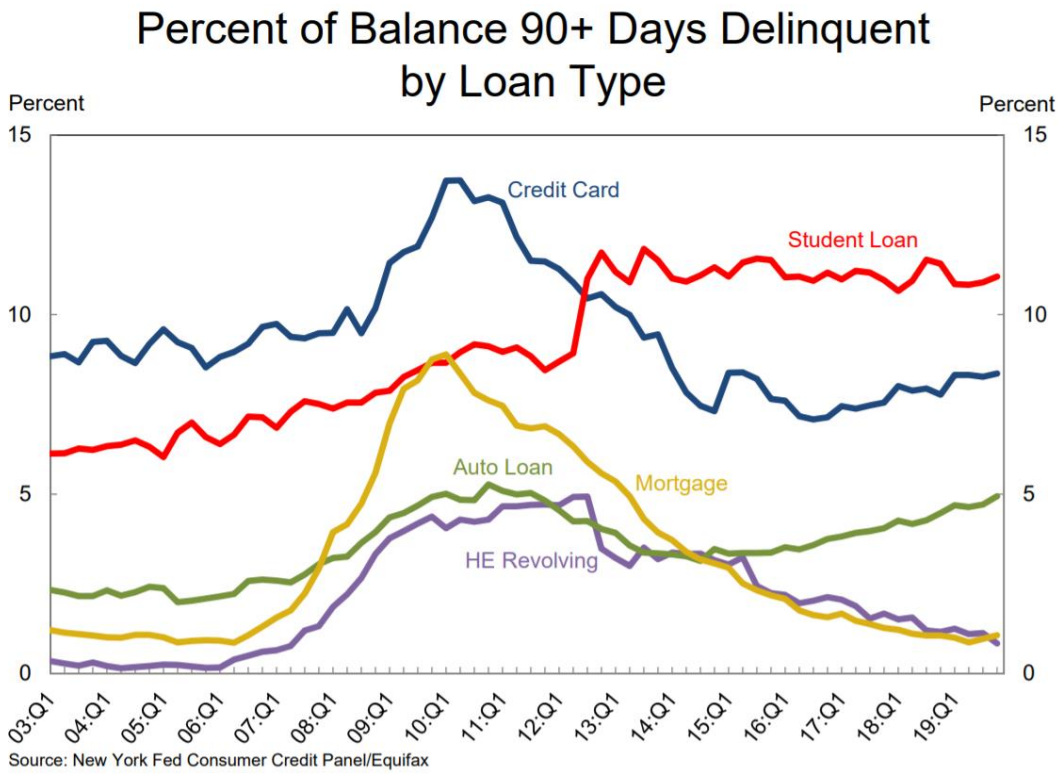
The return on investment of student loans can vary because the earning potential of obtaining a college degree is largely dependent on an individual's field of study. According to Payscale, a software company that aims to greatly increase pay transparency through big data, the top degrees in terms of early career earnings for 2019 are those in the STEM fields and business. These degrees have early career salaries that start around $50,000 and can go as high as $100,000. By contrast, the fields of study that have the lowest early career earnings are those in the arts and humanities. These degrees start around $30,000 (Payscale, 2019). Since the majors in these fields are not in as much of a demand as the STEM and business majors, they do not earn as high of salaries.

Miller and Nikaj (2018) identify the relationship between different types of student loan borrowers and homeownership. They find that this relationship is important, as owning a home is the primary way Americans accumulate wealth. Of all borrowers, they found that for every 10% increase in the amount of student loans, the chance that they become homeowners decreases by .3% (Miller & Nikaj, 2018). Those who have student loans but did not complete their degree are 7.8% less likely to own a home by 26 than those who complete their bachelor's degree (Miller & Nikaj, 2018). The benefits of homeownership extend beyond wealth accumulation, as homeownership also leads to better child outcomes, better unemployment rates and length, as well as lower crime rates (Miller & Nikaj, 2018). While this study just focused on student loans, it could be extrapolated to those who have any significant amount of debt tied to non-appreciating assets.

These levels of debt might not be an issue in the current economic environment, but inevitably, the United States will enter into another recession, and the consequences from these levels of debt could be even greater than those seen during the Great Recession. Therefore, the increase in education for individuals on the different kinds of debt and their benefits and consequences is one of the ways increased financial literacy would help the debt problem in the United States.

Not only have the total amounts of debt increased, but the percentage of the balances that are delinquent have also increased (Quarterly Report of Household Debt and Credit, 2019). From figure 2 below, it is evident that student loan debt is leading the way in this category, followed by credit card debt and then by auto loan debt. This is a massive problem that has only gained significant attention in the past couple of years. Interestingly, both mortgage debt and

home equity debt (HE Revolving) have been decreasing over the past several years. This could be the result of both improving conditions in the job market as well as the overall economy.



(Figure 2)
Source: (New York Fed Consumer Credit Panel/Equifax, 2019)
https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/hhdc_2019q4.pdf

These problems, while relatively specific in scope, point to the underlying problem of people not having a sufficient degree of financial literacy. It has been shown that a lack of financial literacy, along with certain behavioral traits, is what leads individuals to being in too much debt (Ottaviani & Vandone, 2018). Having too much debt, without any change in financial behavior, ultimately leads one to become delinquent and eventually defaulting on that debt. There are other consequences of not having adequate financial literacy, but levels of debt are perhaps the most well-known and pronounced. Through more financial literacy education, Individuals would be more informed on the costs and benefits on taking on different types of debt and the debt landscape would look significantly different. Financial education would help

individuals learn more about how to handle their finances so that they could avoid the problem of going too much into debt. Additionally, they would not have to deal with the problems that having too much debt can have both in the present and later in life.

III. Defining Financial Literacy

The first step to trying to get a grasp on the financial literacy problem in the United States is to first understand what financial literacy really means. While there are many different variations of the definition of financial literacy, this thesis follows Huston (2010) and defines financial literacy as "how well an individual can understand and use personal finance-related information." (Huston, 2010) This definition was created by Sandra Huston, an Associate Professor of Personal Financial Planning at Texas Tech University, after she performed a metanalysis on over seventy different financial literacy studies. Defining financial literacy in this way includes both a knowledge and application component since knowledge, without application, adds no value (Huston, 2010). This is an important distinction because if someone possesses the knowledge to be more financially literate but does not act on it, it is not only hard to measure, but it would then not fit into this definition of financial literacy. This definition has also been used in various other academic studies and research, so it is widely regarded as the best definition of financial literacy.

It is also important to define what topics are included in financial literacy. Through her metanalysis, Huston contends that there are three main topics included in financial literacy. They are money basics, the transfer of money through borrowing and investing, and methods to protect wealth and transfer risk (Huston, 2010). These areas provide a solid foundation to not only narrow down what is included in financial literacy, but also a standard to critique current

financial education curricula. It can also help those who design financial education curricula because it would provide a fundamental set of topics to build courses from.

The first topic of financial literacy, money basics, includes topics such as the time value of money, purchasing power, and compound interest. Additionally, this includes the use of checking and savings accounts, and other ways individuals manage their day-to-day finances. This area is the most fundamental area of financial literacy. As such, the rest of the topics build upon it.

The second topic, the transfer of money, brings in the subjects of borrowing and investing. Knowledge of this area of financial literacy can allow individuals to make more complex financial decisions such as knowing how to buy a house or knowing which stocks or ETFs to invest in. While the money basics are the foundation for financial literacy, mastery of the topics in the transfer of money portion can have a transformative impact on those who achieve it.

The last area of financial literacy that most pieces of literature focus on is how to protect wealth and transfer risk. The typical methods discussed in this area include ways to lower risk such as through insurance products and diversification of assets. While it is always important to keep these things in mind when it comes to personal finance, it is even more important when there is substantial wealth or other assets that individuals need to protect. Introductory financial education tends to briefly touch on each of these topics (Huston, 2010).

An additional factor that affects financial literacy is how proficient one is with technology. This factor is not always discussed in literature about financial literacy because it has only emerged as a significant barrier recently. Consequently, there is not a tremendous

amount of quality data or numerous studies on technology's impact on financial literacy. Accessing personal financial information is achieved through computers and phones now more than ever before. Having the ability to use these tools can put one person at a serious advantage financially over someone who does not know how to use technology to enhance their finances. This is particularly an issue with older individuals, as they did not group up with the technology that exists today.

IV. Methodology and Data

The majority of studies and accompanying literature mostly focus on either one of two ways to look at financial literacy. The first method is to look at financial literacy from a macro perspective. This could be on a state-wide, country-wide or even a global scale. These types of studies, such as the National Financial Capability Study (NFCS), are often data-focused in nature and are not designed to focus on the specific details of the results that they provide. While they provide a great resource to look at the data, they are not always effective in explaining how the trends and statistics came to be.

The second popular way of studying financial literacy is through a very micro and often empirical lens. Subtopics within financial literacy such as financial education in high school or college, financial education in the workplace, or even the effects of location on financial literacy are examples of topics studied through this approach. Similar to the macro studies, these types of studies are also an effective way to analyze very specific aspects of financial literacy. However, the micro studies do not always explain how their results fit into the overall trends in financial literacy. Sometimes, they might not fit into the current trends at all, which is also beneficial to know.

This paper, however, aims to analyze how the micro studies fit into, or do not fit into, the overall state and trends of financial literacy in the United States. This is beneficial because it provides both the national direction and brief looks into specific areas of financial literacy, particularly the areas that are in the most need of improvement.

For the macro data and trends, this paper heavily relies on FINRA's study conducted every three years called the "National Financial Capability Study" (NFCS). This study surveys people on many financial topics such as how they make ends meet, plan ahead, manage various financial products, the extent of their knowledge of finance, and also their decisions as it relates to personal finance. The objectives of the study are to "benchmark key indicators of financial capability and evaluate how these indicators vary with underlying demographic, behavioral, attitudinal and financial literacy characteristics" (FINRA Foundation NFCS, 2018). Because this study is conducted every three years, it also provides an excellent representation of how financial literacy rates and attitudes have changed over time.

While each iteration of the NFCS provides a plethora of valuable information, this paper focuses on the financial literacy portion. Specifically, this paper uses the average of the results of the financial literacy quiz portion of the NFCS as the measure of financial literacy. Each question in the quiz portion pertained to a different topic within financial literacy. All of the questions were either multiple choice or true/false (summary statistics of survey results are provided in appendix A). While these questions might seem easy to some, only 7% of those who responded to the survey were able to answer all six questions correctly (FINRA Foundation NFCS, 2018).

1. Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
3. If interest rates rise, what will typically happen to bond prices?
4. Suppose you owe $1,000 on a loan and the interest rate you are charged is 20% per year compounded annually. If you didn't pay anything off, at this interest rate, how many years would it take for the amount you owe to double?
5. A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.
6. Buying a single company's stock usually provides a safer return than a stock mutual fund.

National Financial Capability Study 2018. https://www.usfinancialcapability.org/downloads.php

For 2018, the NFCS consisted of a sample of 27,091 respondents who were 18+ using a non-probability quota. The study was made up of about 500 respondents in each state, with quotas set to the approximate the Census distributions based on data from the Census Bureau's American Community Survey. The national statistics were weighted to be representative of the national population according to the Census Bureau. Likewise, state statistics are weighted to be representative of the population of each state (FINRA Foundation NFCS, 2018). Overall, the NFCS provides a solid representation of the United States.

V. Results and Discussion

While "The State of U.S. Financial Capability" studies provide statistics on financial literacy on many different factors and demographics, they do not provide any of the context or contributing factors behind the results of the studies. With the aid of additional, more focused studies, this paper attempts to connect both the statistics on a macro level and the more empirical studies on a micro level. The connections identified can then aid those with the ability to affect

financial literacy rates, particularly policymakers, curricula designers, and legislatures, to make more informed decisions.

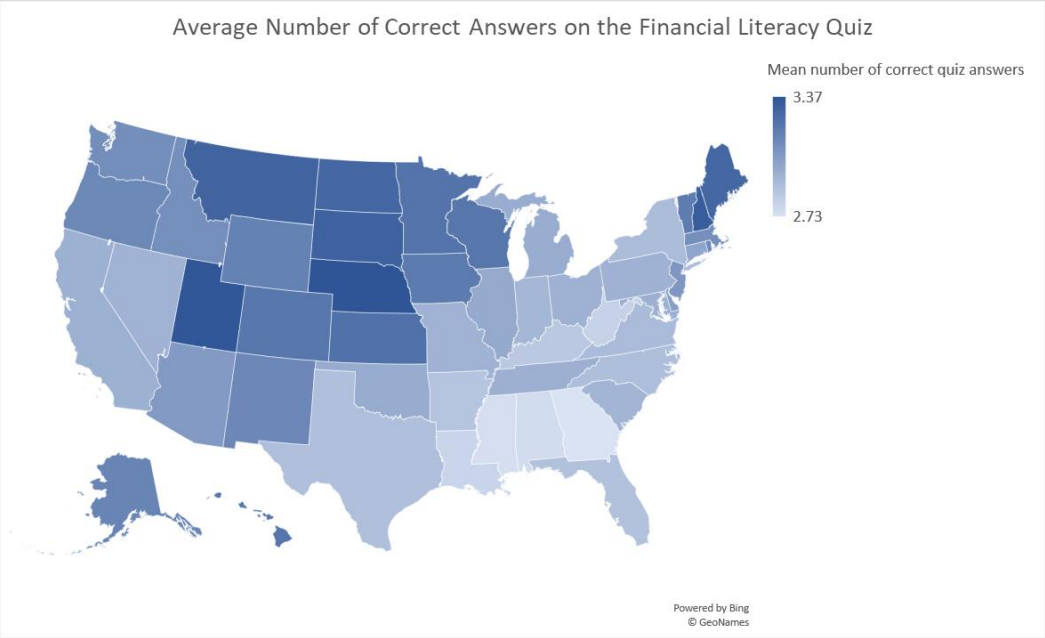
The following subtopics within financial literacy are explained in more detail below.

- Geographic distribution
- The 18-34 age group
- The 35-54 age group
- The 55+ age group
- Income's effects on financial literacy
- People not seeking financial advice
- Racial differences in financial literacy
- Gender differences in financial literacy

Geographic Distribution of Financial Literacy

One major factor that correlates with financial literacy rates is regional location. Not surprisingly, financial literacy scores differ on a regional and state-by-state basis. There could be numerous factors that contribute to this. Statewide and county specific policies along with the overall strength of local and regional economies are just a couple of the possible reasons. Below are graphical representations of how the different regions of the United States performed on the financial literacy portion of the 2018 NFCS. It is important to note that the national average was 3 out of 6 questions correct on the quiz. This provides a baseline to compare the results from the different regions.

2018



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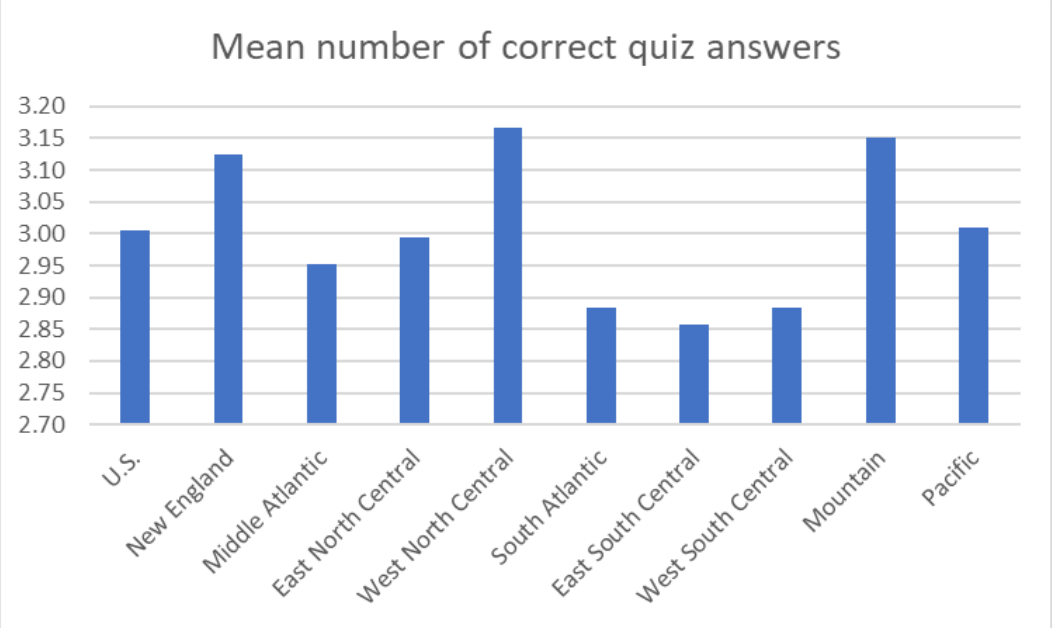


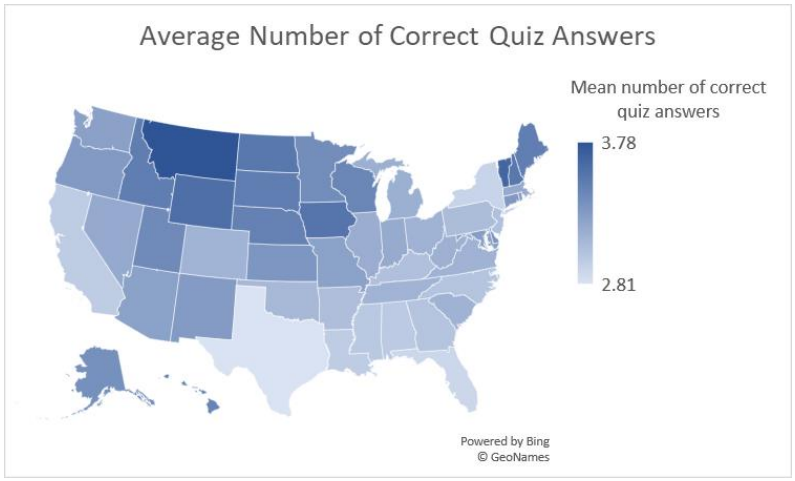
(Figure 4)

Data provided by the National Financial Capability Study 2018.
https://www.usfinancialcapability.org/downloads.php To see full data tables, see appendix B.

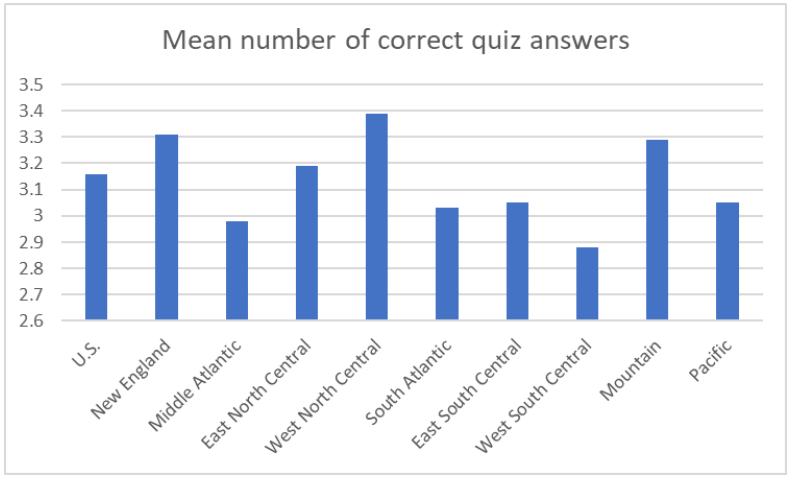
From the 2018 data, it is evident that some geographic regions performed much better than others on the financial literacy quiz. This could be due to many factors such as state-wide education standards and the overall demographics of the population in each state. In general, the South, Southeast, and East performed the worst, while the New England, West North Central, and Mountain regions performed the best on the quiz.

This analysis is necessary because it identifies which regions of the United States need the most improvement in financial literacy. From this information, policymakers can analyze what the regions with the highest scores are doing right and then apply those same practices to the lower scoring regions. Additionally, regions that have performed poorly can use the proven methods used by the regions that performed well as a guide.

2015



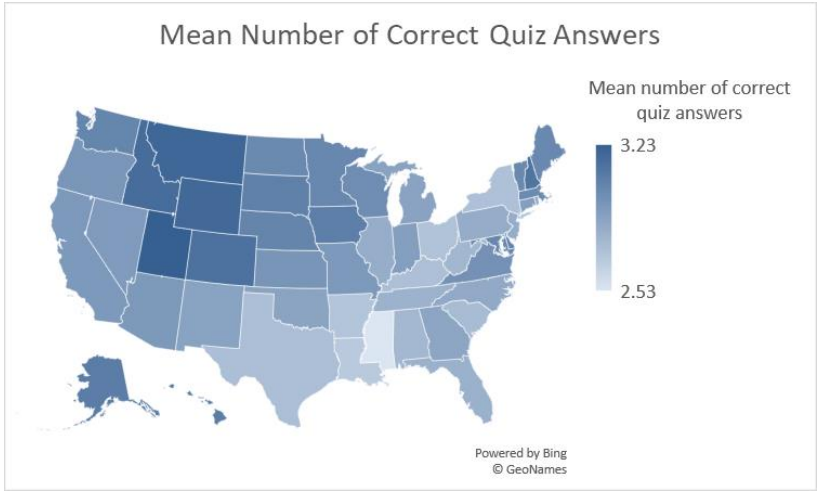
(Figure 5)



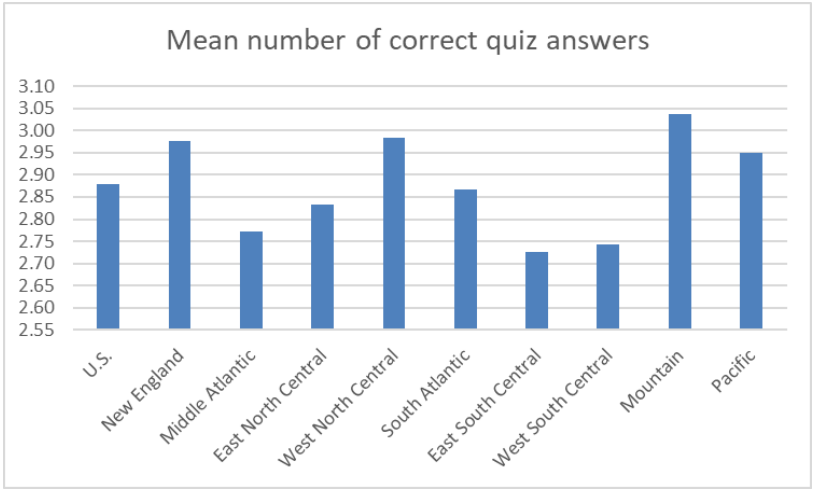
(Figure 6)

Data provided by the National Financial Capability Study 2015. https://www.usfinancialcapability.org/downloads.php To see full data tables, see appendix C.

2012



(Figure 7)



(Figure 8)

Data provided by the National Financial Capability Study 2012. https://www.usfinancialcapability.org/downloads.php To see full data tables, see appendix D.

Another comparison of the different regions of the United States was done from a temporal standpoint. This was done using the data from both the 2015 and the 2012 iterations of the NFCS. It is important to note that from a national standpoint, the average increased to 3.16 from 2.88 from 2012 to 2015. In 2018, that average declined to 3.00.

The change in financial literacy for different regions allows policymakers to see if their efforts to combat the financial literacy problem are working. Federal policymakers as well as legislatures of the low performing states can use this information to put adjust current legislation as well as enact bills to continue to help combat financial illiteracy. The trends identified ultimately act as evidence to show which regions have been improving and which states have been declining.

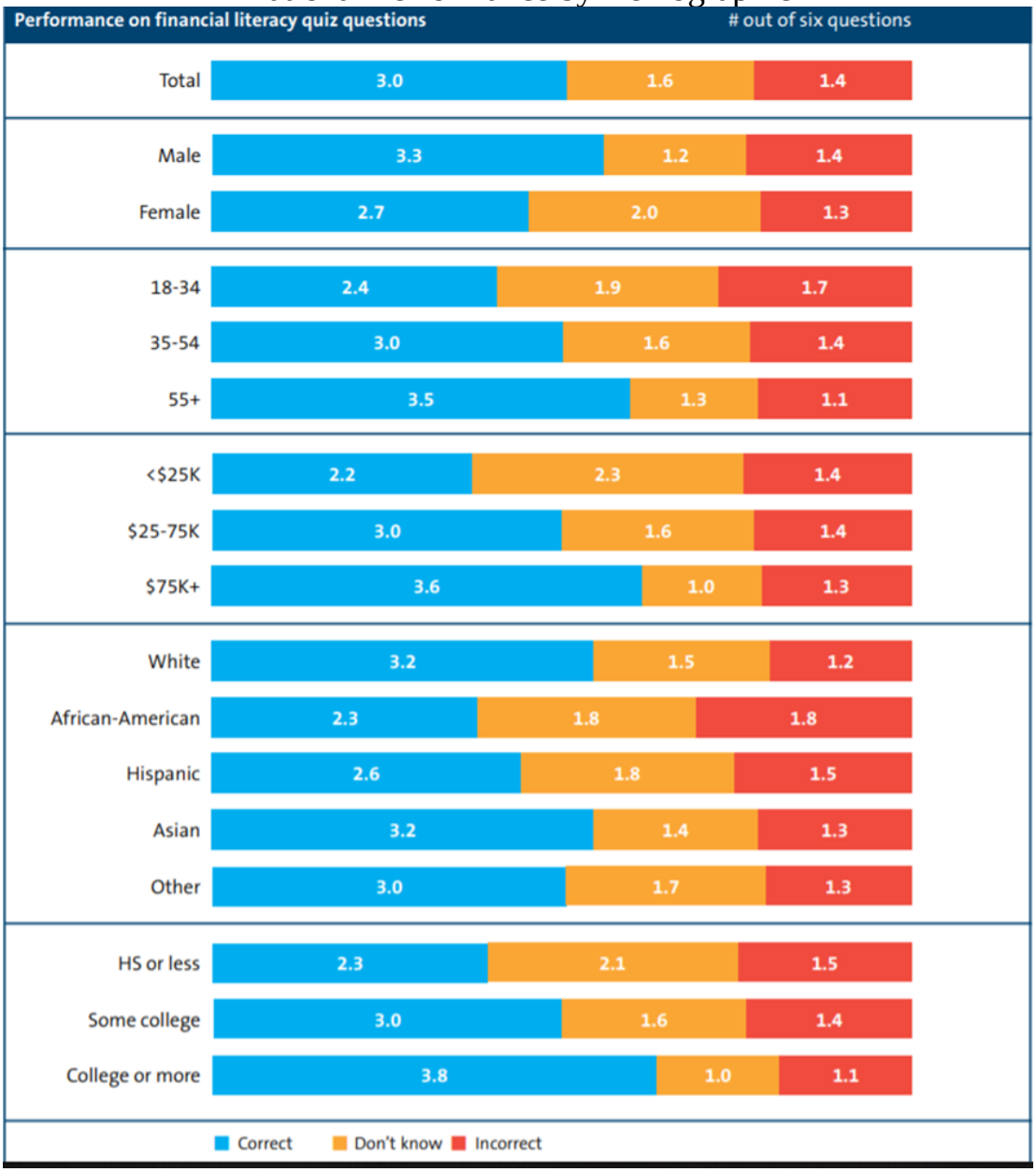
Selected State-by-State Analysis

To take a deeper look at the states that performed the best and worst on the financial literacy portion of the National Financial Capability Study, a comparison is provided below. The lowest five states and the highest five states were included in the analysis. The demographics within each state analyzed are consistent with those that the NFCS has emphasized in their report each iteration. The last section of the comparison, seeing if the states require financial education, was not included in the 2018 NFCS, but its importance to financial literacy rates is quite significant, as will be discussed later in this paper.

The main demographics that the NFCS felt had the biggest impact on financial literacy scores were gender, age, income, race, and level of education. As such, this paper will use the same demographic characteristics. For 2018, the groups that had the lowest average scores on the financial literacy test in each category were females, those in the 18-34 age group,

individuals who make less than $25 thousand per year, African-Americans, and those who have a high school diploma or less (FINRA Foundation NFCS, 2018). To figure out if these factors are consistent with the states that did the best and worst on the financial literacy test, a comparison was performed.

National Performance by Demographic



(Figure 9)

Source: (FINRA Foundation NFCS, 2018)
https://www.usfinancialcapability.org/downloads/NFCS_2018_Report_Natl_Findings.pdf

The 5 States with the Lowest Financial Literacy 2018

	Georgia	Mississippi	Alabama	Louisiana	West Virginia
Mean number of correct quiz answers	2.73	2.75	2.77	2.80	2.81
Age					
18-34	30.8%	29.7%	29.1%	31.0%	25.8%
35-54	35.4%	33.0%	32.4%	32.6%	31.8%
55+	33.8%	37.3%	38.5%	36.4%	42.5%
Income					
<$25,000	27.5%	28.0%	26.0%	27.5%	27.1%
$25,000-75,000	45.3%	45.4%	46.1%	42.9%	45.0%
$75,000+	27.2%	26.6%	27.9%	29.7%	27.9%
Race					
White	55.5%	59.0%	67.7%	60.9%	93.1%
African American	30.4%	36.3%	25.9%	30.7%	3.8%
Hispanic	8.0%	2.4%	3.2%	4.8%	1.1%
Asian	4.1%	1.0%	1.3%	1.9%	0.8%
Other	1.9%	1.2%	1.8%	1.8%	1.3%
Level of Education					
High School or less	37.7%	28.7%	34.0%	37.6%	36.5%
Some College	26.2%	37.9%	31.6%	32.3%	34.2%
College or More	36.1%	33.4%	34.4%	30.1%	29.3%
Is Financial Education Required in High School? *					
Standalone course required to be taken	No	No	Yes	No	No
Personal Finance integrated into another course	Yes	Yes	No	No	No
High School Course Required to be offered	Yes	Yes	Yes	Yes	Yes

(Table 1)

Data provided by the National Financial Capability Study 2018.
https://www.usfinancialcapability.org/downloads.php

*Data provided by the Council for Economic Education "Survey of the States 2020"
https://www.councilforeconed.org/wp-content/uploads/2020/02/2020-Survey-of-the-States.pdf

The 5 States with the Highest Financial Literacy 2018

	Montana	South Dakota	New Hampshire	Utah	Nebraska
Mean number of correct quiz answers	3.30	3.31	3.33	3.37	3.37
Age					
18-34	28.0%	30.2%	26.8%	36.9%	30.8%
35-54	30.3%	30.4%	32.1%	34.0%	31.9%
55+	41.8%	39.5%	41.1%	29.1%	37.3%
Income					
<$25,000	22.6%	18.6%	17.4%	19.6%	19.1%
$25,000-75,000	48.1%	46.5%	45.3%	47.4%	47.6%
$75,000+	29.3%	34.9%	37.3%	33.0%	33.3%
Race					
White	88.7%	85.6%	91.6%	80.3%	82.4%
African American	0.5%	1.6%	1.3%	1.1%	4.3%
Hispanic	3.0%	3.0%	3.1%	12.5%	8.8%
Asian	0.9%	1.4%	2.7%	3.5%	2.4%
Other	7.0%	8.4%	1.3%	2.7%	2.0%
Level of Education					
High School or less	26.5%	25.5%	25.0%	20.7%	26.3%
Some College	33.6%	29.5%	27.8%	33.8%	31.0%
College or More	39.9%	45.0%	47.1%	45.5%	42.7%
Is Financial Education Required in High School? *					
Standalone course required to be taken	No	No	No	Yes	No
Personal Finance integrated into another course	No	No	Yes	No	No
High School Course Required to be offered	No	Yes	Yes	Yes	No

(Table 2)

Data provided by the National Financial Capability Study 2018.
https://www.usfinancialcapability.org/downloads.php

*Data provided by the Council for Economic Education "Survey of the States 2020"
https://www.councilforeconed.org/wp-content/uploads/2020/02/2020-Survey-of-the-States.pd

Comparing the demographics of the top five states and the bottom five states with respect to their financial literacy scores allows for a more detailed look into the makeup of each state and how that affects its financial literacy scores. From this comparison we can also see how the demographics of a specific state differ between those similar to it as well as differ from the states on the opposite end of the financial literacy spectrum. The results highlight the demographic characteristics that seem to have a large impact on a particular state's financial literacy.

While this comparison is consistent with the factors that the NFCS considers important, one factor that was not included in this comparison was gender. The exclusion was due to a few reasons. First, there are not any significant differences between the proportions of men and women in each state. The states are all around 50% men and 50% women, with some very slight, insignificant differences. Second, while men do tend to score higher on the financial literacy quiz, this is not necessarily linked to their gender. There are other factors outside of gender that play a role in this difference which will be covered in a later part of this paper.

From the data, three immediate trends are visible. A high-level analysis is provided in this section and a discussion in further detail is provided in a later section. The first trend is that the five states that have the lowest financial literacy also have the highest percentage of respondents making $25,000 or less. This trend is in line with the existing belief that those with low incomes tend to have lower financial literacy (FINRA Foundation NFCS, 2018).

The second major trend is that the states with the lowest financial literacy have a significantly higher percentage of African Americans than the states with the highest financial literacy. The majority of the states with the lowest financial literacy had around a 30% African American population compared to less than 5% of the states with the highest financial literacy. In addition, the lowest states had a much lower percentage of white population. It is important to

note that there were not significant differences in the other ethnicities (Hispanic, Asian, and other) between the states with the highest and lowest financial literacy rates. This difference is the most significant disparity between the best and worst-performing states.

The last trend evidenced by this analysis is that higher education levels lead to greater financial literacy. The lowest states had higher percentages of people with only a high school diploma or less and lower percentages of people who graduated college. The inverse is true for the states with the highest financial literacy scores. This is also consistent with the prevailing belief about the connection between education and financial literacy. Interestingly, the age group makeup of both the lowest and highest states were not all that different. This suggests that age does not play as much of a role in financial literacy as originally thought. The lowest five states do have higher percentages of people in the 18-34 age group, but not as much of a difference between states as other demographics.

Most states from this comparison mandate that a personal finance class be offered in high school. Just because they are offered, however, does not mean that students are enrolling and learning the material. Additionally, the lack of a requirement to take a personal finance class could lead to less resources being devoted to creating and updating coursework for the class.

Two of the lowest five states and one of the top five states have found a way to integrate personal finance education into another class (Council for Economic Education, 2020). Only one state in each of the two groups of states have a standalone personal finance class that is required to be taken in high school. This is quite troubling as it illustrates that states, particularly the lowest scoring states, might not be aware of the financial literacy problem.

Financial Literacy in the 18-34 Age Group

Parents' Effects

The financial literacy rates in the 18-34 age group are particularly troubling. This group's scores on the financial literacy quiz portion of the NFCS are the lowest and have also been on a steady decline over the past several iterations of the study. Additionally, the 18-34 age group is perhaps the most important of the three. The ages between 18 and 34 are the time when young adults learn important financial skills that they will carry throughout the rest of their lives. The financial habits that individuals learn in this age group have been shown to stick with them into their adult lives (Jorgesen, Savla, 2010).

One factor that influences one's financial attitudes and behaviors in this age group is the effect that parents have in teaching good money habits and knowledge. A study conducted by Bryce Jorgesen and Jyoti Savla attempted to quantify the significance of this influence. By surveying 420 students, the researchers were able to identify ways parents influenced their kids financially (Jorgesen, Savla, 2010).

Through this study, they found that parents had a strong influence on college students' financial behaviors and attitudes (Jorgesen, Savla, 2010). Specifically, they found that the amount of financial learning and the frequency of financial learning were the two ways that parents could influence their children financially (Jorgesen, Savla, 2010). Surprisingly, they did not find that parents had a strong influence on students' financial knowledge (Jorgesen, Savla, 2010). The efficacy of parents' teaching of financial literacy is important because there is a lack of financial education in traditional schooling. As such, the burden is oftentimes put on parents to teach their children personal finance. Since financial literacy rates for this group are low and

continue to decline, parents might not be teaching their children as much as they should be (Jorgesen, Savla, 2010).

The study did not only focus on the effects of parents, however, as it also took into account the class rank of its participants. In fact, they found that class rank also had a large effect on financial literacy. This is likely due to increased financial education, both formal and informal, and the accumulation of experience in financial matters (Jorgesen, Savla, 2010). Since a large percentage of college students live away from their parents, they are also more likely to gain financial education through experience during their college years. In addition, the closer that students get to college graduation, the more they are motivated to be financially literate because they will be entering the workforce and likely becoming truly independent of their parents (Jorgesen, Savla, 2010).

While this study was just focused on college students, it can also be applied to those who did not go to college. The influence that parents have on their children's financial attitudes and behaviors can have a significant impact for years into the future. Those who do not go to college might have to learn financial knowledge even sooner because they will likely be entering the workforce and becoming independent of their parents even sooner than their college counterparts. This emphasizes the importance of parents instilling good financial behaviors and knowledge into their children at an early age.

Overall, this study highlights the importance of parents in teaching their kids good financial behaviors and attitudes. From the study, we can see that parents could do a better job teaching their children financial knowledge. This could be one way that the financial literacy rates for this age group could start to improve. Programs that teach parents ways that they can integrate financial education into their children's lives from an early age could be one method to

stop the decline. Additionally, this study shows that it is the Freshmen and Sophomore classes that need financial literacy education the most out of the college population (Jorgesen, Savla, 2010). College administrators could use this finding as a way to target potential financial education programs.

The importance of Financial education in High School and College

High school and college are arguably the most important times for young people to start good money habits. Since the ages of most students are between 14 and 22, the potential impact of learning the importance of saving and investing during this period of their lives is enormous. However, a large percentage of this demographic will not be able to experience this benefit because they are not being educated on the basics of handling their finances. As discussed previously, this demographic is part of the age group that is declining the most with respect to their financial literacy.

An analysis performed by Christopher Jacobsen and Joao Correia in 2019 from the University of Massachusetts Dartmouth tried to identify correlations between students' financial literacy scores and factors outside of the normal demographic identifiers. Their sample size was 362 participants from a large public university (Jacobsen & Correia 2019). The researchers asked the participants several questions similar to the set of questions asked on the NFCS. The results of this study can be an important resource when designing and implementing financial education courses.

They organized their study around several initial hypotheses. Their first hypothesis, that business majors would score higher on a financial literacy test than non-business majors, proved to be correct. Business majors scored the highest while visual and performing arts majors scored

the lowest (Jacobsen & Correia 2019). This finding alone could prove to be invaluable to college administrators as it shows that certain majors need more financial education. Placing more emphasis on the financial education of majors outside of business is one way to really make a difference.

Their second hypothesis, that students that have already taken financial literacy courses would score higher than students who have not, also proved to be true (Jacobsen & Correia 2019). The most likely scenario that a student would have previously enrolled in a financial education course would be in high school. They found that those who have previously had financial education, at least in the short term, had better financial literacy scores (Jacobsen & Correia 2019). This finding shows that financial education, at least in the short term, can be effective in teaching young people sound financial knowledge and behaviors.

Familial exposure to the field of finance was the subject of hypothesis three. Through this study, they found that those who had a family member working in the financial industry had a higher score than those who did not (Jacobsen & Correia 2019). This is a promising peripheral benefit of the financial industry since the financial activities sub-sector consists of 8.72 million people as of October 2019 (Bureau of Labor Statistics, 2019).

Interestingly, while a higher level of confidence correlated with higher scores, motivation was not a factor that correlated with test scores (Jacobsen & Correia 2019). The researchers did note that their measurement of motivation was lacking. However, they did encounter students saying that they have not previously taken any financial education coursework because it was not part of their normal curriculum (Jacobsen & Correia 2019). As will be discussed later, implementing a required financial education course for high school graduation is one step that

can both improve motivation to learn finance concepts, but also set students up to lead much better financial lives.

The main message that can be taken from this study is that financial education curricula should be targeting the groups that otherwise would not receive any type of financial education. Specifically, non-business students, students without family members in the financial industry, and students who have not enrolled in any financial education courses previously. Also, as mentioned earlier, freshman and sophomore students regardless of major should be included in the focus as well. While students should not be excluded if they have any of these characteristics, administrators of financial education should be more focused on reaching the students that need the education the most.

Financial Literacy in the 35-54 Age Group

Similar to the 18-34 age group, the 35-54 group is in a decline as well. Those that belong to this group tend to be in the middle to end of their careers. Some of the main financial goals of this age group are to ensure they will have enough money for retirement, ensure financial stability, a begin to set up the foundation to leave a legacy to their family.

A main factor in this age range is the shift from fluid to crystallized intelligence, which naturally leads to greater knowledge and better decision making financially. Fluid intelligence, which is one's ability to understand new information and differentiate it from old information, is quite different from crystallized intelligence, which is one's knowledge based on experience (Henager & Cude, 2016). Younger individuals tend to have more fluid intelligence and then start to gain more crystallized intelligence as they get older (Henager & Cude, 2016). On the other hand, as individuals get older, they generally start to lose the fluid intelligence of their

youth. This age group represents the most optimal part of Americans' lives where they start to gain more crystallized intelligence while still retaining fluid intelligence. As a result, "middle-aged adults borrowed more effectively, paid lower interest rates, and paid fewer fees than either younger adults or older adults." (Henager & Cude, 2016).

Another factor that is unique to this age group is that there is a high probability that members in this age group have children that belong to the 18-34 age group. As discussed earlier, the financial literacy scores for parents in the 34-55 age group can have a large impact on the younger age group's financial literacy. Increasing the financial literacy scores for this age group, in theory, should have a positive impact on the younger age group.

The financial literacy scores of the 55+ age group has consistently beaten the scores of the 35-54 age group which is in line with the existing literature on financial literacy that concludes that financial knowledge increases with age. Unlike the other age groups, the 35-54 age group is not often focused on for research and studies. Consequently, there is not an abundance of literature on this age group with respect to financial literacy. Instead of encountering specific reasons why this age group's financial literacy is declining, it is likely that this age group is experiencing a general shift in the amount of financial knowledge that they possess. It could be argued that the deeper decline of the 18-34 age group causes the decline in the 35-54 age group as time passes and more members of the former age group become members of the latter, and as a result, drag the average down. However, more research needs to be done to either approve or disprove this conjecture.

Financial Literacy in the 55+ Age Group

Unlike the other two age groups, the 55+ age group's financial literacy scores have remained relatively the same, with only a small decline. One of the reasons that could account for this lack of change is that since this is the highest demographic in terms of age, they have had the most time for financial education both in the form of traditional education and also learning through experience. The formal financial education that this demographic receives during this part of life most likely comes from either their workplace or through retirement plan administrators.

While this population has likely already passed major life milestones such as buying a house and having kids, they still have the important events of retirement, enrolling in Medicare, and getting Social Security. As such, increased financial knowledge can be a huge benefit for individuals in this age group (Bavafa, Liu, & Mukherjee, 2019).

Despite the fact that this age group has the highest probability of having received some form of financial education because they are the oldest, not everyone in this age group has received an adequate level of education. Even if individuals in this age group have received financial education previously, they may still need to be educated on retirement and the various nuances associated with it. However, providing financial education in this demographic can sometimes prove to be challenging. Because they are later in life, they are less likely to be motivated to spend the time to take advantage of education opportunities (Bavafa, Liu, & Mukherjee, 2019).

One of the main ways that researchers found that would contribute to increased financial literacy is increased competency in computers (Bavafa, Liu, & Mukherjee, 2019). Confidence in using computers has dramatically increased since 2000 for those aged 65 and older, but the rate still needs to be higher (Pew Research Center 2017). As of 2016, 67% of adults 65+ have or use the internet compared to 12% in 2000 (Pew Research Center 2017). The same trend appears for owning smartphones as well. Ownership of smartphones in this age group increased from 11% in 2011 to 42% in 2016 (Pew Research Center 2017). The need to be proficient with technology is only going to increase as more companies are shifting towards online and mobile applications for individuals to access their financial information. As such, it is increasingly important that all individuals in this age group, particularly those above 65, become proficient using technology so that they can be more secure financially.

Financial literacy in Retirement

This age group experiences one of the most important times in life, retirement. As such, the need for sufficient financial literacy before and during retirement is essential. The number of those 65 and older in the United States is expected to grow from 52 million in 2018 to 95 million in 2060 (Mather, Scommegna, & Kilduff, 2019). Ensuring that individuals in this age group are prepared for the rest of their lives financially is extremely important. For this paper, we will use 64 years old and older for the ages of retirement. While it is true that full retirement benefits are not fully realized until 67 for most Americans, the average retirement age is a few years earlier. As of 2016, the average retirement age is 65 for men and 63 for women (Center for Retirement Research at Boston College 2018).

Since the majority of retirees belong to the 55+ age group, financial knowledge and behaviors are paramount in making sure that individuals have sufficient retirement savings and

making sure that retirement savings last as long as possible. This challenge is not aided by the fact that life expectancies are getting longer and the viability of programs like Social Security and Medicare are decreasing.

There are some aspects of financial health and literacy that are more important in this age group that are not as significant in the other age groups. Factors such as longevity risk, interest rate risk, and health care costs shift the priorities of financial education for this age group (Rappaport & Siegel, 2009). While financial literacy for a young person would include topics such as diversification, compound interest, and borrowing money, financial literacy for someone in retirement might shift toward reducing risk, preservation of wealth, and planning for health care costs (Rappaport & Siegel, 2009). The underlying definition of financial literacy does not change, but rather the financial priorities change.

Income's Effects on Financial Literacy

According to the National Financial Capability Study, those with higher incomes tend to have higher financial literacy (FINRA Foundation NFCS, 2018). Those with incomes above $75 thousand a year had an average of 3.6 out of 6 questions right whereas those with incomes under $25 thousand had an average of 2.2 questions right out of 6 (FINRA Foundation NFCS, 2018). This discrepancy warrants a deeper look into the effect of income on an individual's financial literacy.

Interestingly, those with higher incomes also had higher confidence in their ability to reach their financial goals. 88% of those with incomes over $75 thousand per year thought of themselves as very or somewhat confident in their financial self-efficacy compared to 55% of those with incomes less than $25 thousand per year (FINRA Foundation NFCS, 2018). This

result from the study is in agreement with the overall percentage of people who reported a high self-assessment of financial knowledge, which was 71% (FINRA Foundation NFCS, 2018).

Those with higher incomes are also more likely to seek financial advice. Higher earners likely have more assets to protect and grow and can also afford the fees associated with financial advice (Porto & Xiao, 2016). Similarly, wealthier households have more of an incentive to be more financially literate. For example, jobs that pay less than $25 thousand per year are less likely to give employees benefits such as a 401(K). Higher earners, on the other hand, can and do take advantage of these benefits. While it is still useful to learn about tax-advantaged investment accounts such as an IRA (Individual Retirement Account), the motivation to learn for those with lower incomes would understandably be lower.

Individuals are Not Seeking Financial Advice

Another issue that amplifies the financial literacy problem in the United States is that people are not seeking financial advice as much as they should. The resources for increasing one's financial literacy could be out there (and are in most cases), but if people are not seeking out that advice, then the financial literacy problem will not improve. There are generally two main reasons for people not seeking financial guidance. Either there is not enough free or low-cost financial advice available, or people are just not looking for it because they are unaware that they should look for it. Consequences of not seeking financial advice, particularly for those with low financial literacy are that they are more likely to have an under-diversified portfolio, low participation in the stock market, and more debt, often from unconventional sources (Calcagno & Monticone, 2015).

Going to financial advisors is one way that individuals can get financial advice. Financial advisors can sometimes act as a substitute for low financial literacy, as long as their intentions are to do what is best for their clients (Calcagno & Monticone, 2015). Unfortunately, this is not always the case. Financial advisors can have biases toward certain investments or products which may or may not be disclosed. If their biases are not disclosed, financial advisors can have little to no effect on the financial situation of their client (Calcagno & Monticone, 2015). The push towards investing in certain products, without fully taking into account the needs and goals of the client, can put them into an unwanted financial situation. Sales commissions for pushing certain products can often produce these biases.

If financial advisors do not always provide the best advice due to biases, will people follow unbiased advice given for free? A study conducted was conducted in Germany to see if, given free financial advice, members of a brokerage would read the advice and/or follow it (Bhattacharya et al. 2012). The researchers found that only 5% of those offered free advice accepted it. However, those who did receive the free advice often did not follow it (Bhattacharya et al. 2012). It is important to note that following the advice would have achieved its goal of increasing portfolio efficiency. The researchers also found that the people that need financial advice the most are the least likely to obtain it. The average profile of those who accepted the advice were "male, older, wealthier, more financially sophisticated." (Bhattacharya et al. 2012). While this study was conducted in Germany, the overall findings of the study could also be applied to the United States.

On the surface, one might conclude that it is the fault of the financial industry for individuals not seeking out financial advice. One might assume that not enough free or low-cost information and advice is available. As shown by the evidence, it is actually the fault of

individuals because they are not motivated to look for the information. Several studies have shown that even with free advice, individuals are unlikely to receive the advice and even less likely to follow it. This shifts the focus of this component of low financial literacy. Instead of advocating for more financial information and advice, policymakers should focus more on how to motivate people to seek out financial advice.

Racial Differences in Financial Literacy

As discovered by the state-by-state comparison earlier, race has shown to be the largest difference in the demographics between the states with the highest and lowest financial literacy. Therefore, it is necessary to investigate further to try and determine why minorities, particularly African Americans, have much lower financial literacy rates. There are several areas where the consequences of lower financial literacy for minorities is evident.

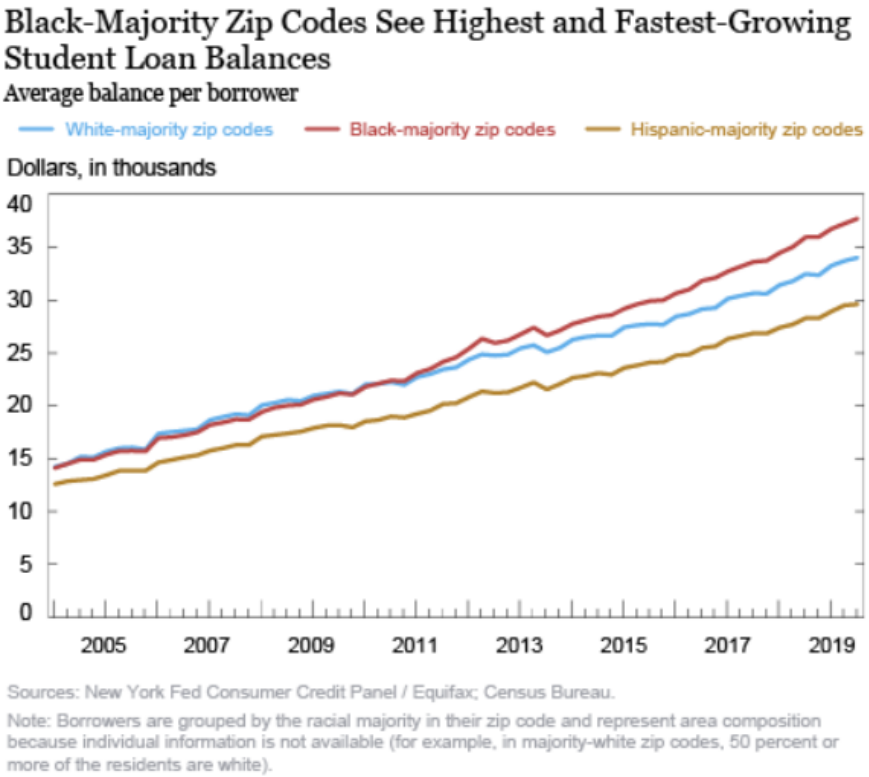
The racial wealth gap has been widening over the past several years. This has been evidenced by the fact that the wealth of minorities has been growing much slower than the wealth of whites (Al-Bahrani, Weathers, & Patel, 2019). The racial wealth gap has several components. The most notable component is homeownership, which explains 27% of the racial wealth gap (Al-Bahrani, Weathers, & Patel, 2019). Another main contributor is the fact that minorities are more likely to have lower incomes and less likely to attend college (Al-Bahrani, Weathers, & Patel, 2019). The data from several iterations of the NFCS supports this claim as the scores for African Americans and Hispanics were considerably lower than whites on the financial literacy quiz for the past nine years.

A study conducted by Abdullah Al-Bahrani, Jamie Weathers, and Darshak Patel in 2019 on the racial differences in financial literacy found that while financial education increases

financial literacy regardless of race, it has shown to have a greater improvement for whites than it does for minorities. They used the 2015 version of the NFCS as a basis for their analysis. They then performed an ordinary least square (OLS) estimation to determine the extent race impacts financial literacy outcomes (Al-Bahrani, Weathers, & Patel, 2019).

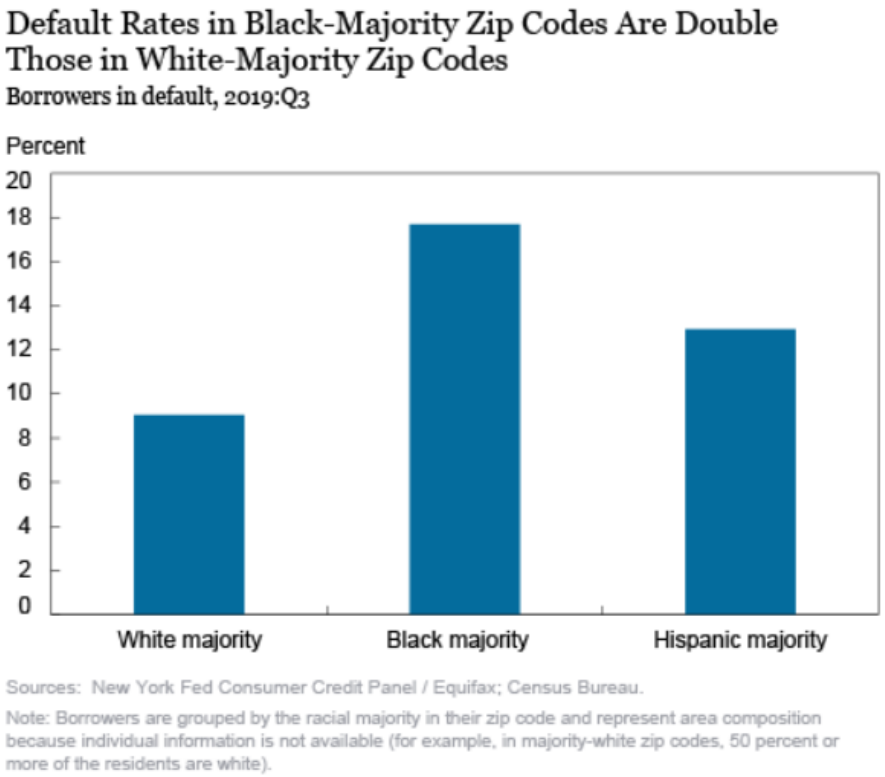
After conducting their research, the authors of this study proposed two reasons why the wealth gap and financial literacy differences are getting wider. First, they propose that "financial literacy curricula [are] administered without considering the education and resources available to the students being served" (Al-Bahrani, Weathers, & Patel, 2019). The second reason they proposed is based on the fact that their data only focused on the enrollment into financial literacy classes and not on the completion of such classes (Al-Bahrani, Weathers, & Patel, 2019). They argue that attrition, rather than enrollment, is to blame for the lack of effectiveness of current financial education to reduce the wealth gap (Al-Bahrani, Weathers, & Patel, 2019). Minorities could be dropping out of these classes at much higher rates than whites which would certainly contribute to lower financial literacy rates.

When it comes to student loans, the Federal Reserve Bank of New York found that zip codes with a majority of African Americans have the highest and fastest growing student loan balances (Haughwout et al. 2019). The most likely reason behind this is that because African Americans typically have lower incomes, African American students would be more likely to need student loans for their college education (Haughwout et al. 2019). The rapid increase in student loan balances puts African Americans at a severe disadvantage after college as well.



(Figure 10)
(Federal Reserve Bank of New York, 2019)
https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/hhdc_2019q4.pdf

In addition to higher student loan balances, African Americans have higher default rates on those loans. These higher rates of default can have lasting consequences later when they want to purchase a home. This has shown to be the case through lower rates of homeownership for people with student loans (Haughwout et al. 2019).



(Figure 11)
(Federal Reserve Bank of New York, 2019)
https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/hhdc_2019q4.pdf

Many of the differences in financial situations between those of different races could be reduced through increased financial education. In the case of the student loan problems in the minority populations, increased financial education could have led students to attend less expensive colleges or even trade schools, which are often overlooked.

Gender Differences in Financial Literacy

The 2012, 2015, and 2018 iterations of the National Financial Capability study all found that women scored less than men on the financial literacy quiz (FINRA Foundation NFCS, 2018). When such a disparity exists, it is important to look to see what might be causing it. However, the gender difference in financial literacy has not been widely studied. There is not an

abundance of literature written on this subject in the United States. Most of the current studies and literature on gender differences in financial literacy are from other countries. Additionally, learning why this gap exists has proven to be challenging.

A study conducted by Raquel Fonseca et al. hypothesized that the difference was because of the specialization of duties at home. They hypothesized that males handled the finances more often which leads to lower financial literacy for females since they are not as involved in the finances of the family (Fonseca et al., 2012). However, they did not find this to be the case. Through their study of over 1,000 individuals in relationships, they did not find support for this hypothesis. Although they did come to the conclusion that the person in the relationship that has the higher education typically handles the finances for the couple (Fonseca et al., 2012). They also found that if both individuals in the relationship have the same level of education, they tend to share the financial responsibilities equally (Fonseca et al., 2012).

Another hypothesis in the current literature on the gender gap in financial literacy is that gender stereotypes can have a significant influence on financial knowledge. This was created by Anastasia Driva, Melanie Luhrmann, and Joachim Winter through their study of financial literacy scores from teenagers in Germany (Driva, Luhrmann, & Winter, 2016). They created this hypothesis because they did not find any material knowledge differences between the males and females they studied. Interestingly, they found that females' financial knowledge decreases as the strength of the belief in gender stereotypes increased. The inverse was true for males (Driva, Luhrmann, & Winter, 2016). While this study was conducted in Germany, its results could be applied to the gender gap in financial literacy in the United States. The culture and attitudes of either country is not too distant from each other.

VI. Conclusion

It is very clear that all of the demographics presented in this paper would benefit from increased financial education. However, certain demographics should be focused on more significantly. In particular, those demographics are African Americans and individuals with a high school diploma or less. This is evident in both the national data as well as in the conclusions of those who have studied both the racial differences in financial literacy and also the difference that financial education can make when given earlier in life. Fortunately, these demographics are not mutually exclusive. For example, implementing a financial education program in high school would serve to benefit both those who only achieve a high school education as well as African Americans, as they would enroll in the class as well. This is further explained in the next section.

While this paper does not arrive at any definitive solutions for the financial literacy problem in the United States, it does provide an overview and analysis of the current state of financial literacy and its trends. With the help of the studies and research, I propose several ideas that, if implemented, could very well improve the financial literacy of those who need it the most.

There have been significant strides made in this area from both the public and private sectors, but much more work needs to be done to address this problem. Convincing policymakers in both the state and federal legislatures to put policies in place to improve financial literacy throughout the country is one of the main issues holding improvement back. Papers such as this one could serve as evidence to not only the problem at hand, but also serve as a valuable source of ways that the United State could solve the financial literacy problem. If the

United States does not take action soon to improve financial literacy, the consequences of poor financial behaviors will only continue to increase.

VII. Recommendations

Methods to Improve Financial Literacy

As identified by the NFCS studies, those that need help with financial literacy the most are those with low incomes, minorities, young people, and those with just a high school diploma or less. As discussed previously, African Americans and those with lower education are those with the most need, but luckily there is overlap between and among these groups which indicates that multiple groups could be given more financial education at the same time. As such, the following ideas are ways that the financial literacy problem in the United States could be improved.

Financial Literacy Classes in Public Libraries

Public libraries are often utilized by those with lower incomes. These patrons go to public libraries to use the libraries' computers and other technologies because they are not always able to afford them. Since those with lower incomes performed worse on the financial literacy quiz, it is safe to assume that financial literacy classes at public libraries would help improve that demographic's knowledge and application of financial concepts. This concept has been attempted in libraries across the United States, but it has not caught enough traction to become a nationwide program.

The previous attempts to incorporate financial literacy classes into public libraries have shown that the creation and implementation of such classes have proven to be difficult. A study

conducted by Catherine Scott and Kristin Eschenfelder tried to discover the current state of financial literacy education in public libraries. The scope of their study included several in-person interviews at libraries in the State of Wisconsin as well as a convenience sample web survey across the United States (Smith & Eschenfelder, 2013). Several challenges were identified in helping library patrons with financial literacy.

One of the main challenges of librarians interviewed from the study saw their own mastery of financial knowledge as a barrier to offering financial education classes (Smith & Eschenfelder, 2013). Librarians cannot effectively teach material that they do not already understand themselves. This is where partnerships with outside organizations can help. Banks, credit unions, and retirement plan administrators are all organizations that could help offer financial education programs in public libraries.

With financial services and organizations becoming more technologically complex, the requirements for a certain level of knowledge of computers has become more and more apparent. This was another hurdle that prevented effective financial education classes in libraries. Library patrons' often lacked computer skills which in combination with time pressures made it difficult for librarians to help patrons as much as they felt they needed (Smith & Eschenfelder, 2013).

Patrons' privacy was also an issue that libraries have had to battle. It is often a balancing act between knowing enough about an individual to help them and knowing too much about them to the point that they feel that their personal information has been compromised. Patrons could be apprehensive about telling their personal information to librarians. According to their interviews from the study, librarians felt uneasy working with patrons' personal information and often would not help with completing forms that would require such information (Smith & Eschenfelder, 2013).

These challenges associated with implementing a financial education program in libraries are to be expected. Despite these challenges, public libraries are a great way to reach those who need financial education the most. Given what was discovered during the implementation of a financial education program on a small-scale, for a financial education program in public libraries to be effective, it would require two things. The two requirements are training for one or two librarians at each library to teach the curriculum and an optional computer literacy component. The computer literacy portion should be taken by those who feel like they need it and skipped for those who do not. Lastly, a financial education program should be general enough so that the privacy of the patrons taking the course is protected. Patrons should only be required to give very basic information, such as name, phone number, and email address. Designing a program this way would solve a lot of the challenges faced with giving a financial education program to the general public.

Making a financial education course required for graduation in high school

The age group with the lowest financial literacy scores for several iterations of the NFCS is the 18-34 age group. With this age group beginning just after high school, it illustrates that young people are not receiving enough financial education in high school. Making a financial education course required for graduation ensures that students are exposed to at least a basic level of financial knowledge that will benefit them after graduation.

Financial education typically comes in three forms. They are traditional education in a classroom, influence from family and friends, and trial-and error through experience. In today's society, more and more people are learning through trial-and-error. This can prove detrimental because the mistakes made through this method of learning can have lifelong consequences.

Large amounts of debt, low savings rates, and poor financial situations can all result from not receiving financial education early in life. While many people learn valuable lessons from making these mistakes, the financial position they are in from making the mistakes can prove extremely difficult to recover from. The other two methods of learning personal finance are not often received for a few reasons.

Because of the low number of states that require a finance class for high school education, many students do not receive personal finance education in the traditional sense. As a result, this places much of the burden on parents to teach their children personal finance (Jorgesen, Savla, 2010). Many parents do not have the time or, in some cases, the knowledge to teach their children these concepts on top of all of their other responsibilities.

According to the Council for Economic Education, only 14 states require that a personal finance class be offered in high school. 13 of those states require a course in personal finance for graduation (Council for Economic Education, 2020). Having more states require a personal finance course for high school graduation can have a huge impact on students once they graduate. Preparing students for either higher education or the workforce with a knowledge of personal finance can have a transformative impact on their financial well-being for the rest of their lives.

Increasing the number of financial education programs in the workplace

The effect of poor decisions from a lack of financial literacy can extend to many aspects of one's life beyond the home. In particular, they can have negative consequences on productivity at work (Bannon, Ford, & Meltzer, 2014). About 43% of companies offer financial education programs and 59% of companies offer retirement planning assistance in some form

(Bannon, Ford, & Meltzer, 2014). These numbers, however, should be much higher. Given the number of people who are struggling financially in the United States, increasing the amount of companies that offer some type of financial education in the workplace could have an immense positive impact on the financial literacy problem. While Bannon, Ford, and Meltzer advocate for CPAs to administer these financial literacy programs, CFPs and those with other similar certifications that give unbiased advice could administer the programs as well.

The benefits of implementing financial education programs into the workplace exists for both the employer and the employee. For the employer, more financially sound employees tend to have higher productivity, lower health insurance costs, more retention, and higher employee engagement (Bannon, Ford, & Meltzer, 2014). Through the benefits of offering financial education to employees, employers can experience both less payroll costs because of less absences and lower health insurance costs through the decreased stress from employees getting a better grasp of their finances (Bannon, Ford, & Meltzer, 2014).

The benefits for the employee include better decision making and improved confidence, the knowledge to build assets, better understanding of employee benefits, and a better gauge on how much money they will need in retirement (Bannon, Ford, & Meltzer, 2014). This can then improve then improve the mental health of employees because they will be less worried about their financial future. Overall, increasing the amount of financial education programs in the workplace can lead to better financial lives for millions of Americans.

Requiring applicants of certain types of loans to take a short class on the loan to ensure that they truly understand what the loan entails

Before borrowing money, it is imperative to make sure that individuals know how they are going to use the money, how it will enhance their lives or be a good investment, and most importantly, how they are going to pay it back. Unfortunately, the current trends in different kinds of debt suggest that individuals are not using this approach when taking out debt (Quarterly Report of Household Debt and Credit, 2019). As mentioned at the beginning of this thesis, the overall level of debt in the United States has reached all-time highs. Delinquencies of certain types of debt, especially student loan debt and auto loan debt have been increasing (Quarterly Report of Household Debt and Credit, 2019). If individuals were more educated on the different kinds of debt and their pros and cons, then the debt problem in the United States would not be as much of an issue.

Requiring loan applicants to take a short course in order to get a loan would allow the applicant to get a full picture of what their obligations would be under the loan. As such, this requirement should only be applied to loans of longer durations and higher amounts such as student loans, mortgages, and auto loans. Requiring a course for a loan with shorter durations and lesser amounts would not get the same effect, as the risk is lower.

This class requirement would be a win-win for both the lenders and the borrowers. For the lenders, the class can serve as a way to decrease the risk of borrowers and likely decrease delinquencies and defaults. For borrowers, the class would act as a screener to truly make sure that they want the loan after learning more about it. However, the class would have to be created and administered through a third party so that bias can be avoided. A few examples of ways it could be administered are through a government initiative, charity, or a university. At the end of the day, requiring a class in order to get a loan could go a long way in both reducing the amount debt as well as delinquencies and defaults in the United States.

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Appendix A- Summary Statistics of 2018 NFCS Financial Literacy Survey Results

		National Results
Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?	More than $102	72%
	Exactly $102	7%
	Less than $102	6%
	Don't know	13%
	Prefer not to say	1%
	Total	*27091*
Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?	More than today	12%
	Exactly the same	10%
	Less than today	55%
	Don't know	21%
	Prefer not to say	1%
	Total	*27091*
If interest rates rise, what will typically happen to bond prices?	They will rise	22%
	They will fall	26%
	They will stay the same	6%
	There is no relationship between bond prices and the interest rate	10%
	Don't know	36%
	Prefer not to say	1%
	Total	*27091*
Suppose you owe $1,000 on a loan and the interest rate you are charged is 20% per year compounded annually. If you didn't pay anything off, at this interest rate, how many years would it take for the amount you owe to double?	Less than 2 years	5%
	At least 2 years but less than 5 years	30%
	At least 5 years but less than 10 years	29%
	At least 10 years	8%
	Don't know	26%
	Prefer not to say	2%
	Total	*27091*
A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.	True	73%
	False	9%
	Don't know	17%
	Prefer not to say	1%
	Total	*27091*
Buying a single company's stock usually provides a safer return than a stock mutual fund.	True	11%
	False	43%
	Don't know	45%
	Prefer not to say	1%
	Total	*27091*

Appendix B-Regional and State-by-State Results from the 2018 NFCS

	Nation	Census Division								
	U.S.	New Engl	Middle Atl	East Nort	West Nor	South Atl	East Sout	West Sou	Mountain	Pacific
Mean number of correct quiz answers	3.00	3.13	2.95	2.99	3.17	2.88	2.86	2.88	3.15	3.01
Mean number of incorrect quiz answers	1.35	1.29	1.33	1.35	1.26	1.42	1.45	1.43	1.27	1.39
Mean number of 'Don't know' quiz answers	1.58	1.50	1.64	1.58	1.51	1.63	1.61	1.64	1.52	1.54
Total	*27091*	*3008*	*1511*	*2525*	*3507*	*4520*	*2009*	*2003*	*4008*	*4000*

	Alabama	Alaska	Arizona	Arkansas	California	Colorado	Connectic	Delaware	District of	Florida	Georgia	Hawaii	Idaho	Illinois	Indiana	Iowa
Mean number of correct quiz answers	2.77	3.16	3.06	2.87	2.96	3.22	3.01	3.04	3.18	2.88	2.73	3.22	3.11	2.99	2.93	3.20
Mean number of incorrect quiz answers	1.54	1.32	1.30	1.25	1.44	1.26	1.36	1.39	1.23	1.40	1.49	1.30	1.19	1.33	1.38	1.29
Mean number of 'Don't know' quiz answers	1.64	1.51	1.59	1.80	1.53	1.47	1.51	1.51	1.50	1.67	1.67	1.41	1.66	1.61	1.65	1.45
Total	*501*	*500*	*503*	*501*	*500*	*500*	*501*	*502*	*500*	*500*	*501*	*500*	*500*	*511*	*502*	*502*

	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachu	Michigan	Minnesota	Mississipp	Missouri	Montana	Nebraska	Nevada
Mean number of correct quiz answers	3.25	2.85	2.80	3.29	2.96	3.11	2.98	3.23	2.75	2.95	3.30	3.37	2.95
Mean number of incorrect quiz answers	1.24	1.47	1.47	1.07	1.45	1.33	1.40	1.13	1.52	1.41	1.21	1.16	1.43
Mean number of 'Don't know' quiz answers	1.46	1.56	1.66	1.58	1.50	1.48	1.53	1.57	1.67	1.56	1.39	1.44	1.55
Total	*500*	*504*	*502*	*505*	*504*	*500*	*506*	*501*	*500*	*501*	*501*	*502*	*501*

	New Ham	New Jers	New Mexi	New York	North Car	North Dak	Ohio	Oklahoma	Oregon	Pennsylva	Rhode Isl	South Car	South Dak	Tennesse	Texas	Utah
Mean number of correct quiz answers	3.33	3.07	3.15	2.90	2.90	3.29	2.95	2.98	3.14	2.95	3.14	2.94	3.31	2.96	2.89	3.37
Mean number of incorrect quiz answers	1.17	1.34	1.32	1.37	1.38	1.23	1.35	1.29	1.17	1.27	1.22	1.39	1.23	1.35	1.47	1.10
Mean number of 'Don't know' quiz answers	1.41	1.51	1.49	1.67	1.66	1.43	1.61	1.68	1.64	1.67	1.61	1.62	1.39	1.61	1.61	1.46
Total	*501*	*503*	*500*	*500*	*500*	*500*	*500*	*500*	*1250*	*508*	*501*	*503*	*501*	*504*	*500*	*502*

	Vermont	Virginia	Washingt	West Virg	Wisconsi	Wyoming
Mean number of correct quiz answers	3.19	2.91	3.11	2.81	3.22	3.17
Mean number of incorrect quiz answers	1.21	1.42	1.24	1.41	1.28	1.25
Mean number of 'Don't know' quiz answers	1.52	1.59	1.57	1.67	1.45	1.54
Total	*500*	*510*	*1250*	*500*	*506*	*501*

Data provided by the National Financial Capability Study 2018. https://www.usfinancialcapability.org/downloads.php

Appendix C-Regional and State-by-State Results from the 2015 NFCS

	Nation	Census Division								
	U.S.	New Engl	Middle Atl	East Nort	West Nor	South Atl	East Sout	West Sou	Mountain	Pacific
Mean number of correct quiz answers	3.16	3.31	2.98	3.19	3.39	3.03	3.05	2.88	3.29	3.05
Mean number of incorrect quiz answers	1.25	1.14	1.31	1.22	1.14	1.37	1.31	1.33	1.24	1.33
Mean number of 'Don't know' quiz answers	1.54	1.5	1.66	1.51	1.44	1.54	1.59	1.74	1.43	1.59
Total	27564	3002	2007	3009	3509	4518	2009	2500	4004	3006

	Alabama	Alaska	Arizona	Arkansas	California	Colorado	Connectic	Delaware	District of	Florida	Georgia	Hawaii	Idaho	Illinois	Indiana	Iowa
Mean number of correct quiz answers	2.98	3.37	3.25	3.06	2.97	3.13	3.32	3.35	3	2.89	3.02	3.45	3.5	3.17	3.19	3.56
Mean number of incorrect quiz answers	1.34	1.12	1.31	1.33	1.39	1.24	1.24	1.11	1.46	1.46	1.43	1.14	1.03	1.26	1.25	1.13
Mean number of 'Don't know' quiz answers	1.62	1.48	1.4	1.53	1.6	1.55	1.41	1.53	1.47	1.58	1.49	1.36	1.43	1.5	1.5	1.3
Total	503	500	500	500	1000	500	500	502	502	500	505	501	501	1004	500	502

	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachu	Michigan	Minnesota	Mississip	Missouri	Montana	Nebraska	Nevada	New Ham	New Jers	New Mexi	New York
Mean number of correct quiz answers	3.33	3.04	2.97	3.49	3.28	3.2	3.16	3.39	2.99	3.25	3.78	3.47	3.2	3.54	3.04	3.3	2.91
Mean number of incorrect quiz answers	1.19	1.29	1.39	1.06	1.22	1.12	1.21	1.04	1.34	1.23	1.05	1.11	1.38	1.05	1.27	1.27	1.35
Mean number of 'Don't know' quiz answers	1.38	1.63	1.6	1.38	1.47	1.63	1.56	1.54	1.61	1.49	1.12	1.37	1.39	1.36	1.64	1.41	1.69
Total	500	500	500	500	500	500	500	500	503	503	500	503	503	501	507	500	1000

	North Car	North Dak	Ohio	Oklahoma	Oregon	Pennsylva	Rhode Isl	South Ca	South Dal	Tennesse	Texas	Utah	Vermont	Virginia
Mean number of correct quiz answers	3.02	3.54	3.14	3.1	3.31	3.07	3.3	3.14	3.5	3.13	2.81	3.41	3.66	3.14
Mean number of incorrect quiz answers	1.32	1.03	1.3	1.25	1.18	1.27	1.18	1.29	1.04	1.3	1.33	1.14	1.03	1.38
Mean number of 'Don't know' quiz answers	1.63	1.35	1.51	1.58	1.48	1.64	1.45	1.54	1.38	1.54	1.81	1.42	1.3	1.42
Total	505	500	500	500	501	500	500	500	501	503	1000	500	501	504

	Washingt	West Virg	Wisconsi	Wyoming
Mean number of correct quiz answers	3.26	3.15	3.44	3.6
Mean number of incorrect quiz answers	1.11	1.17	0.99	1.07
Mean number of 'Don't know' quiz answers	1.57	1.63	1.5	1.28
Total	504	500	505	500

Data provided by the National Financial Capability Study 2015. https://www.usfinancialcapability.org/downloads.php

Appendix D-Regional and State-by-State Results from the 2012 NFCS

	Nation	Census Division								
	U.S.	New Engl	Middle Atl	East Nort	West Nor	South Atl	East Sout	West Sou	Mountain	Pacific
Mean number of correct quiz answers	2.88	2.98	2.77	2.83	2.98	2.87	2.73	2.74	3.04	2.95
Mean number of incorrect quiz answers	0.81	0.80	0.83	0.78	0.74	0.86	0.90	0.86	0.76	0.75
Mean number of 'Don't know' quiz answers	1.26	1.17	1.35	1.32	1.22	1.21	1.31	1.35	1.16	1.27
Total	*25509*	*3001*	*1500*	*2502*	*3502*	*4501*	*2000*	*2000*	*4002*	*2501*

	Alabama	Alaska	Arizona	Arkansas	California	Colorado	Connectic	Delaware	District of	Florida	Georgia	Hawaii	Idaho	Illinois
Mean number of correct quiz answers	2.77	3.07	2.93	2.70	2.93	3.13	2.90	3.04	2.95	2.80	2.86	3.07	3.16	2.82
Mean number of incorrect quiz answers	0.89	0.69	0.80	0.85	0.76	0.78	0.93	0.78	0.91	0.92	0.88	0.76	0.70	0.77
Mean number of 'Don't know' quiz answers	1.26	1.20	1.23	1.40	1.27	1.04	1.11	1.15	1.07	1.22	1.18	1.11	1.11	1.30
Total	*500*	*501*	*500*	*500*	*500*	*501*	*500*	*500*	*500*	*500*	*500*	*500*	*500*	*500*

	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachu	Michigan	Minnesota	Mississipp	Missouri	Montana	Nebraska
Mean number of correct quiz answers	2.90	3.06	2.95	2.73	2.67	3.01	3.02	3.01	2.88	3.02	2.53	2.93	3.19	3.03
Mean number of incorrect quiz answers	0.78	0.72	0.78	0.93	0.95	0.75	0.87	0.78	0.80	0.68	0.91	0.79	0.63	0.75
Mean number of 'Don't know' quiz answers	1.31	1.14	1.21	1.27	1.31	1.18	1.08	1.14	1.27	1.25	1.51	1.22	1.14	1.17
Total	*500*	*501*	*500*	*500*	*500*	*500*	*500*	*501*	*500*	*501*	*500*	*500*	*500*	*500*

	Nevada	New Ham	New Jers	New Mexi	New York	North Car	North Dak	Ohio	Oklahoma	Oregon	Pennsylva	Rhode Isl	South Car	South Dak	Tennesse
Mean number of correct quiz answers	2.92	3.12	2.82	2.88	2.72	2.84	3.01	2.71	2.87	2.94	2.83	2.83	2.75	3.05	2.80
Mean number of incorrect quiz answers	0.83	0.69	0.81	0.78	0.88	0.83	0.67	0.80	0.87	0.74	0.75	0.74	0.93	0.76	0.89
Mean number of 'Don't know' quiz answers	1.18	1.17	1.30	1.30	1.34	1.28	1.24	1.45	1.21	1.29	1.39	1.38	1.23	1.14	1.26
Total	*500*	*500*	*500*	*501*	*500*	*500*	*500*	*501*	*500*	*500*	*500*	*500*	*501*	*500*	*500*

	Texas	Utah	Vermont	Virginia	Washingt	West Virg	Wisconsi	Wyoming
Mean number of correct quiz answers	2.73	3.23	3.01	2.96	3.03	2.77	2.99	3.18
Mean number of incorrect quiz answers	0.85	0.64	0.68	0.74	0.73	0.83	0.76	0.70
Mean number of 'Don't know' quiz answers	1.37	1.12	1.27	1.26	1.22	1.36	1.23	1.10
Total	*500*	*500*	*500*	*500*	*500*	*500*	*501*	*500*

Data provided by the National Financial Capability Study 2012. https://www.usfinancialcapability.org/downloads.php